

Allison M Burns. A Study of the Information Seeking Behaviors of Integrative Medicine Professionals. A Master's Paper for the M.S. in L.S degree. April, 2007. 34 pages.  
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As the practice of integrative medicine becomes more common, it is important for library science professionals to understand the research needs of integrative medicine professionals in order to best provide resources and services to this population. This paper surveys integrative medicine professionals affiliated with the four North Carolina academic programs and centers for integrative medicine. The results of this study indicate that this population may need more targeted library services due to the difficulty in finding information in this field.

Headings:

Integrative medicine

Alternative medicine -- Information resources

Medical libraries -- Information services

Medical libraries -- Reference services

Medical libraries -- Collection development

A STUDY OF THE INFORMATION SEEKING BEHAVIORS OF INTEGRATIVE  
MEDICINE PROFESSIONALS

by  
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A Master's paper submitted to the faculty of the School of Information and Library  
Science of the University of North Carolina at Chapel Hill in partial fulfillment of the  
requirements for the degree of Master of Science in  
Library Science.

Chapel Hill, North Carolina

April 2007

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## **INTRODUCTION**

The National Center for Complementary and Alternative Medicine (NCCAM), an arm of the National Institutes of Health, defines integrative medicine as the combination of treatments from conventional medicine and complementary and alternative medicine (CAM) for which there is some high-quality evidence of safety and effectiveness (NCCAM, 2007). CAM treatments can include such therapies as acupuncture, nutritional supplements, and meditation. The use of CAM is becoming increasingly more common; a 2002 study (Barnes, 2002) by the NCCAM found that 36 percent of U.S. adults aged 18 years and over use some form of CAM.

Although the use of CAM is increasingly more common, it is difficult to find high-quality research and information about CAM practices and therapies (Murphy, 2003). Little research has been published about the resources used by CAM professionals and even less has been published about integrative medicine professionals. The objective of this research is to identify the research needs and resources used by integrative medicine professionals with the ultimate goal of helping librarians better understand these information needs so that they can best assist them.

Due to the lack of information on integrative medicine professionals' research behaviors, it is important to study this population in order to compare and contrast their behaviors with those of strictly CAM professionals and strictly conventional medicine professionals. This information can help librarians better collaborate with integrative medicine professionals to promote research and patient care. Therefore this study will

investigate the reasons integrative medicine professionals search for information and which resources they use to execute these searches.

This study will specifically investigate the information seeking behaviors and information needs of integrative medicine professionals affiliated with the four North Carolina academic programs or centers for integrative medicine: Carolinas Integrative Health (Charlotte, NC), Duke Integrative Medicine (Durham, NC), University of North Carolina's Program on Integrative Medicine (Chapel Hill, NC), and Wake Forest University Baptist Medical Center's Program for Complementary and Integrative Medicine (Winston-Salem, NC). Hopefully, the findings of this survey will help health sciences librarians in North Carolina and perhaps across the country better understand this population and therefore better meet their information needs.

## **LITERATURE REVIEW**

Over the past decade, use of CAM therapies by the American public has increased dramatically. In two studies, Eisenberg et al. (1993, 1998) found that as many as four out of ten Americans used alternative medicine therapies, and that the total number of visits to alternative medicine practitioners exceeds the visits to all US primary care physicians. Kaptchuk and Eisenberg (2001) suggested that the United States is undergoing a shift in the structure of contemporary health care, where the current biomedical-based system is being replaced by "medical pluralism", in which people use therapies and practices from a variety of healing systems. Though the phrase "integrative medicine" is not used here, it is essentially the same ideas as "medical pluralism."

Integrative medicine is a relatively new term that encompasses more than just CAM modalities. It focuses on health and healing rather than disease and treatment and views patients as “whole people with minds and spirits as well as bodies” (Rees and Weil, 2001). It seeks to integrate the best of both CAM and conventional medicine to optimize patient care, placing emphasis on the patient-provider relationship, disease prevention and wellness, and patients’ participation in their own health (Hughes, 2001).

Finding reliable information for even widely known areas of CAM and integrative medicine can be difficult. Much CAM and integrative medicine information is scattered across many journals, published in many languages (Ezzo et al., 1998). Efficacy and safety data based on standard clinical trials are lacking. Additionally, much of CAM and integrative medicine information can only be found in “grey literature”, such as pamphlets, trade journals, and conference proceedings (Linde and Mulrow, 2000). Murphy et al. (2003) found that searching biomedical databases for CAM is challenging because of the inconsistent use of controlled vocabulary and indexing procedures in different databases.

Some of these difficulties in finding CAM and integrative medicine are beginning to be addressed. A prototype for a comprehensive information resource for CAM called Complementary and Alternative Medicine Digital Library (CAMed) has been developed to demonstrate a comprehensive information resource for the CAM community (Kronenberg et al., 2001). NCCAM and the National Library of Medicine (NLM) have been developing tools that facilitate access to CAM information in the journal literature, such as CAM on PubMed (Owen and Fang, 2003).

Little information has been published about the different roles that librarians have with respect to CAM, and only one article could be found that addressed librarians concerning integrative medicine resources. *Bibliotheca Medica Canadiana* offers an ongoing column that highlights CAM information resources for health professionals, and one of these columns did focus on integrative medicine resources (Monkman and Becker, 2001). Curry and Smith (1998) considered CAM information from a collection management perspective. This exploratory study found that librarians were hesitant about the acceptability of radical materials, particularly those whose information could harm a patient, whereas physicians and medical students favored an all-inclusive selection policy.

One recent study (Crumley, 2006) surveyed both librarians and health care professionals involved with CAM with the objectives of identifying resources CAM professionals use and explore librarians' approaches to teaching and searching for CAM information. This study found that the major roles of CAM information professionals is similar to those of other librarians including providing education about CAM resources, providing access to information, and collecting and housing CAM information. The authors noted that due to the subspecialties in and the variety of CAM, it is difficult to standardize the searching process. The authors also indicated a need for the study and creation of models for integrating CAM and conventional medicine.

A slightly older study (Owen and Fang, 2003) surveyed university faculty seeking CAM information and found that health professionals are frequently unable to locate the CAM information they need. The authors also found that the majority of CAM professionals have little knowledge of existing CAM resources. The authors indicated



that medical librarians need to educate health professionals in the identification and use of authoritative CAM resources.

## **METHODOLOGY**

A web-based survey consisting of ten questions, both close-ended and open-ended, was sent via e-mail to integrative medicine professionals affiliated with the four North Carolina academic programs or centers for integrative medicine: Carolinas Integrative Health, Duke Integrative Medicine, University of North Carolina's Program on Integrative Medicine, and Wake Forest University Baptist Medical Center's Program for Complementary and Integrative Medicine. (See Appendix A for survey instrument of this study.)

This survey was designed to investigate the information-seeking behavior of health professionals seeking integrative medicine information. The survey questions were based on questions used in similar studies of health professionals seeking CAM information. Owen and Fang (2003) developed a fourteen question survey assessing information needs related to CAM and Crumley (2006) conducted thirty-two question interviews of health professionals using CAM.

This survey was a cross-sectional survey: data was collected at one point in time. The web-based survey was appropriate because of its efficiency, in terms of recruitment and data collection, compared to other methods. As the targeted population of this study was health care professionals whose time is limited, a short, easy-to-access survey was imperative to ensure adequate participation.

The first two questions were open-ended, asking the participant to list their title and role and responsibilities within their position. Questions three through five asked

about information searches and were all close-ended but each included an “other” category in which the participant could specify other possible answers not included in the survey choices. These three questions asked participants about the reasons they search for information, whether they conduct their own searches or consult with librarians, and what specific types of information they are looking for when conducting searches.

Questions six and seven asked participants about specific resources they used to find information, both electronic and print. The question about electronic resources was close-ended however each choice was broad and the participant had the opportunity to specify further within each choice. The question about print resources was intentionally left open-ended because integrative medicine covers many disciplines and it would be difficult to limit answer choices to a small set of print resources.

Questions eight and nine asked about participants’ use of library services. Question eight was close-ended and asked participants about specific library services used. An “other” category was included for participants to specify other services not already listed in the choices. Question nine was open-ended and asked participants what kinds of library services would be useful to their information searches.

The final question was open-ended and asked participants how their information needs differ, if at all, from conventional health care practitioners.

The survey was approved by the UNC Institutional Review Board.

## **Population**

The study population consisted of 51 health care professionals affiliated with the aforementioned North Carolina academic programs or centers for integrative medicine.

These professionals' roles ranged from medical doctors to massage therapists. Each program identified professionals affiliated with their programs on their web sites. In the case of the UNC, Duke, and Wake Forest programs, e-mail addresses for these professionals were obtained by searching their respective university online directories. The Carolinas Integrative Health program's web site did not list e-mail addresses nor does the Carolinas Healthcare System, of which it is a part, have an e-mail directory. Therefore, the facility was contacted via phone and an administrator agreed to provide her e-mail address. This administrator agreed to be sent the consent letter including link to the survey and then forward this information to the health care professionals at the facility.

In March 2007, a recruitment e-mail message explaining consent and providing a link to the survey was sent to all identified integrative medicine professionals at UNC, Duke, and Wake Forest, as well as the administrator at Carolinas Integrative Health. (See Appendix B for consent e-mail message to participants and Appendix D for the telephone script for contacting Carolinas Integrative Health.) Consent letters and telephone scripts were approved by the UNC Institutional Review Board prior to these materials being sent. Forty-one e-mail messages were sent directly to these professionals and ten were sent indirectly through the Carolinas Integrative Health administrator. Of the 41 e-mail messages sent directly to the professionals, four of those e-mail addresses did not work. Therefore, the total population receiving an invitation to complete the survey was 47 professionals.

One week following the initial e-mail message to the total population, a reminder e-mail message was sent to the same population. (See Appendix C for the reminder e-

mail sent to participants.) After two weeks, 15 responses were collected from participants. This constitutes approximately 32 percent of the total study population.

There was no inducement for participation except that librarians may be able to use the study findings to better serve integrative medicine professionals in their information needs.

## RESULTS

The study population consisted of 47 health care professionals – integrative medicine practitioners affiliated with four North Carolina academic programs or centers for integrative medicine. Of these, 15 professionals completed the survey, representing 32 percent of the total population.

Question 1: What is the title of your position?

**Table 1. Respondents' Titles**

Title of Position	Number (n=15)
Professor	5
Program director	2
Director of school	1
Psychiatrist	1
Mindfulness Based Stress Reduction Instructor	1
Psychologist	1
Body Therapist	1
Health facilitator	1
Health coach	1
Nurse clinician	1
Chiropractor	1
Osteopathic physician	1

Table 1 shows the frequency distribution of titles given. “Professor” was the most frequent title, with 33 percent of the respondents describing themselves as such. It is important to note that some respondents have multiple titles. One participant identified

her title as both “program director” and “professor”. In those cases, both titles are listed in Table 1.

Question 2: What is your role in this position? Or what are your major responsibilities?

**Table 2. Respondents’ Roles and Responsibilites**

Roles and Responsibilities	Number (n=14)
Teaching	7
Patient care	7
Administrative duties (e.g. clinic management)	5
Clinical research	3
Direct a research program	2
Editor of journal	1
Marketing	1

This question was asked to get a better idea of the roles of these integrative medicine professionals that may not be apparent from their titles. This questions aims to get an understanding of what integrative medicine professionals do in order to better provide library services to them. The results of this question are summarized in Table 2. The majority of respondents are involved with direct patient care. Similar to the results of Question 1, some respondents have multiple roles such as providing patient care, conducting research, and teaching.

Question 3: For what reasons do you search for information? Please check all that apply.

1. Professional research
2. Patient care
3. Questions from patients
4. Other (please specify)

## 5. Not Applicable

**Table 3. Reasons Respondents Search for Information**

Reasons	Number (n=14)	Percentage
Professional research	11	78.6%
Patient care	11	78.6%
Questions from patients	10	71.4%
Other	6	42.9%
Not Applicable	0	0.0%

Table 3 shows that professional research and patient care are the top reasons why integrative medicine professionals search for information, with about 79 percent of respondents indicating each as a reason. Questions from patients followed closely behind with about 71 percent of respondents citing it as a reason for searching for information. In the “other” category, respondents described several other reasons for searching for information such as to assist other professionals, deepen their own understanding, and for professional education.

Question 4: Do you conduct your own information searches or do you consult with a librarian? Please check all that apply.

1. I usually conduct my own searches.
2. I usually consult with a librarian.
3. I conduct my own searches and consult with librarians.
4. Other (please specify)
5. Not Applicable

**Table 4. How Respondents Conduct Information Searches**

Conducting Information Searches	Number (n= 14)	Percentage
Conduct own searches	11	78.6%
Conduct own searches and consult with librarians	3	21.4%
Other	2	14.3%
Consult with librarians	0	0.0%
Not Applicable	0	0.0%

Table 4 shows that the majority of respondents conduct their own information searches, about 79 percent. About 21 percent conduct their own searches and consult with librarians. Respondents in the other category reported that they occasionally consult with librarians.

Question 5: What specific types of information are you looking for when searching for information? Please check all that apply.

1. General research studies
2. Evidence-based studies
3. Case reports
4. Current research
5. News
6. Education materials written for patients
7. Other (please specify)
8. None of the above
9. Not applicable

**Table 5. Specific Types of Information Respondents Search For**

Specific Types of Information	Number (n= 14)	Percentage
General research studies	12	85.7%
Evidence-based studies	11	78.6%
Current research	11	78.6%
Clinical trials	10	71.4%
Educational materials written for patients	7	50.0%
Case reports	5	35.7%
News	4	28.6%
Other	2	14.3%
Not applicable	0	0.0%

Table 5 lists the frequency distribution of the specific types of information integrative medicine professionals search for. About 86 percent of respondents report searching for general research studies and about 79 percent of respondents indicate searching for both evidence-based studies and current research. Seventy-one percent of respondents search for clinical trials. Fifty percent of respondents search for patient materials, about 36 percent search for case reports and about 29 percent search for news. In the other category, respondents reported searching for training materials, and information on history and anatomy.

The results show that respondents are generally interested in current research studies, whether in the form of clinical trials, evidence-based studies, or case reports. Half the respondents are also interested in materials written for patients therefore librarians would want to collect both materials written for health care professionals and materials written for patients.

Question 6: For each category of electronic resources listed below, please indicate specific resources within these categories that you use to search for information.

1. Internet (e.g. Google)



2. Databases (e.g. PubMed)

3. Other

4. Not Applicable

**Table 6. Electronic Resources Respondents Use**

Electronic Resources	Number (n= 13)	Percentage
Internet	13	100.0%
Google	7	53.8%
WebMD	1	7.7%
Medscape	1	7.7%
HealthMD	1	7.7%
Altmed	1	7.7%
Amazon	1	7.7%
NCCAM	1	7.7%
The Bravewell Collaborative	1	7.7%
Consortium of Academic Health Centers for Integrative Medicine	1	7.7%
Databases	12	92.3%
PubMed	8	61.5%
AMED	1	7.7%
PsycInfo	1	7.7%
Science Citation Index	1	7.7%
Other	2	15.4%
MedLink Neurology	1	7.7%
The Duke Encyclopedia of New Medicine	1	7.7%

Table 6 displays the frequency distribution of the responses to Question 6 including the specific resources the respondents named. All respondents reported using the Internet to search for information with the majority using the Google search engine specifically. Other specific Internet resources named included the NCCAM web site, WebMD, and the Bravewell Collaborative.

About 92 percent of respondents reported using databases to search for information. Most of these respondents specified that they use PubMed although the

Allied and Alternative Medicine Database (AMED), PsycInfo, and Science Citation Index were mentioned.

In the other category, MedLink Neurology was mentioned as well as a print resource, *The Duke Encyclopedia of New Medicine*.

Question 7: Please list any journals or books you routinely browse or search for information.

**Table 7. Print Resources Respondents Use**

Print Resources	Number (n=13)
Journals	
<i>Alternative Therapies in Health and Medicine</i>	3
<i>Explore</i>	2
<i>American Journal of Psychiatry</i>	1
<i>The Journal of Clinical Psychiatry</i>	1
<i>International Journal of Group Psychotherapy</i>	1
<i>Psychiatric times</i>	1
<i>CNS News</i>	1
<i>T'ai Chi Magazine</i>	1
<i>Psychosomatic Medicine</i>	1
<i>Health Psychology</i>	1
<i>Annals of Behavioral Medicine</i>	1
<i>Neurology</i>	1
<i>Journal of Psychosomatic Research</i>	1
<i>Brain Behavior &amp; Immunity</i>	1
<i>Journal of Alternate Medicine</i>	1
<i>Journal of the American Medical Association (JAMA)</i>	1
<i>Complementary Health Practice Review</i>	1
<i>British Homeopathic Journal</i>	1
<i>Journal of the American Osteopathic Association (JAOA)</i>	1
<i>Journal of Family Practice</i>	1
<i>American Journal of Public Health</i>	1
<i>Environmental Health Perspectives</i>	1
<i>American Journal of Industrial Medicine</i>	1
<i>Journal of Agricultural Safety and Health</i>	1
<i>Journal of Agromedicine</i>	1
<i>The Gerontologist</i>	1
<i>Journal of Gerontology</i>	1
<i>Social Science and Medicine</i>	1
<i>Human Organization</i>	1

<i>Functional Medicine</i> (monthly audio series)	1
<i>International Journal of Radiation Biology</i>	1
<i>Cancer</i>	1
<i>Neuro-oncology</i>	1
<i>Journal of Neurosurgery</i>	1
<i>Journal of Clinical Oncology</i>	1
<i>Biology and Physics</i>	1
Books	
<i>Textbook of Natural Medicine</i>	2
<i>Textbook of Integrative Mental Health</i>	1
<i>The Dao of Taijiquan: Way to Rejuvenation</i>	1
<i>The Dao de Jing</i>	1
<i>The Yi Jing</i>	1
<i>The Duke Encyclopedia of New Medicine</i>	1
<i>Full Catastrophe Living</i>	1
<i>Wherever You Go There You Are</i>	1
<i>Mindfulness-Based Cognitive Therapy for Depression</i>	1
<i>Mindfulness-Based Treatment Approaches</i>	1
<i>Handbook of Positive Psychology</i>	1
<i>Essentials of Complementary and Alternative Medicine</i>	1
<i>Mind/Body Medicine</i>	1
<i>Five Good Minutes</i>	1
<i>Calming Your Anxious Mind</i>	1
<i>Why Zebras Don't Get Ulcers</i>	1
<i>Prescription for Nutritional Healing</i>	1
<i>Integrative Medicine</i> (Rakel)	1
<i>Merritt's Neurology</i>	1
<i>Hands of Light</i>	1
<i>Light Emerging</i>	1
<i>Wheels of Life</i>	1
<i>Healer</i>	1
<i>Sage</i>	1
<i>Animal Speak</i>	1

As noted in the Methodology section, this question was left open-ended to account for the wide variety of disciplines from which integrative medicine professionals come. Table 7 lists the books and journals that were mentioned in the responses, along with the frequency in which they appeared. As expected, this list is wide ranging due to the various specialties of the respondents. One respondent noted that a colleague e-mails integrative medicine publications weekly.

Question 8: If you use a librarian or library for conducting searches, what library services do you use? Please check all that apply.

1. Personal consultation (via in-person, telephone, email, or chat)
2. Interlibrary loan
3. Library courses (e.g. How to Search PubMed)
4. Electronic resources (e.g. electronic journals, online guides and tutorials)
5. Print resources (e.g. print journals)
6. Other (please specify)
7. Not applicable

**Table 8. Library Services Respondents Use**

Library Services	Number (n= 14)	Percentage
Electronic resources	7	50.0%
Personal consultation	6	42.9%
Print resources	6	42.9%
Not applicable	5	35.7%
Interlibrary loan	3	21.4%
Library courses	2	14.3%
Other	0	0.0%

Table 8 shows the frequency distribution of library services that respondents use. Half of the respondents report using their library's electronic resources. About 42 percent of respondents reported using the library's print resources as well as consulting with library staff. About 36 percent of respondents reported that this question was not applicable. About 21 percent of respondents use their library's interlibrary loan services and about 14 percent take advantage of library courses. No respondents had any other library services to specify.

Question 9: Whether or not you use a library to conduct searches, what kinds of library services would be valuable to your information searches or needs?

**Table 9. Respondents' Desired Library Services**

Desired Library Services	Number (n=11)
Electronic resources	3
Electronic access to CAM and integrative medicine journals	1
Access to SCI Journal Citation Reports	1
Online catalogs of library holdings by content	1
Updated list of journals dealing with CAM	1
Patient education materials	1
Learning strategies to make searches more efficient	1
Full-text access to journals	1
Citation checking in papers submitted for publication	1

This question was open-ended and the resulting responses are summarized in Table 9. A common response was the desire for electronic resources as well as access to full-text journals. One respondent desires electronic access to CAM and integrative medicine journals. Patient education materials were mentioned as well as courses on how to make searches more focused or efficient.

Question 10: How do your information needs differ, if at all, from conventional medical practitioners?

**Table 10. Perceived Differences in the Information Needs of Integrative Medicine Practitioners and Conventional Medicine Practitioners**

Perceived Differences	Number (n=12)
More lifestyle/wellness information than specific conditions	3
No difference	3
Fewer subscriptions to CAM and integrative medicine journals	1
Need access from alternative resources	1
More difficult to find evidence-based studies of integrative approaches	1
Many CAM journals are still not covered in PubMed	1

This question was also open-ended and provoked a variety of responses, summarized in Table 10. Interestingly, several respondents did not see any difference in information needs between conventional and integrative medicine practitioners. Some respondents noted that they seek lifestyle and wellness information in addition to specific condition or disease information.

Some respondents noted issues such as the difficulty of finding evidence-based medical information on integrative approaches versus conventional approaches. Another difficulty mentioned is that CAM and integrative medicine journals are less popular and often not subscribed to by libraries. One respondent also noted that many of these journals are not covered by PubMed.

## **CONCLUSIONS**

This study aimed to explore the information needs and information seeking behavior of integrative medicine professionals. Research of this kind has been conducted on conventional health care professionals as well as health care professionals that use CAM but no research has been conducted specifically on integrative medicine professionals. The targeted population of this study was health care professionals affiliated with the four North Carolina academic programs or centers for integrative medicine. A goal of this study is that librarians can use these research findings to better understand this population and meet their information needs.

Study participants were equally interested in finding information on research studies and information related to patient care. They also have a need to search for information related to questions from patients. As several respondents noted, these needs

are not that different from the needs of conventional medicine professionals. However, they do differ in needing more general lifestyle and wellness information and needing CAM and integrative medicine journals. One respondent noted that these types of journals are often not subscribed to by university libraries. Librarians may want to examine their existing print collections and see if they have adequate coverage of CAM and integrative medicine. Since this population also needs materials suitable for their patients, it is important to have consumer materials.

Another issue that librarians want to be aware of is the integrative medicine professionals' need to find evidence-based medical information on integrative medicine approaches versus conventional approaches. As one respondent noted, many CAM journals and integrative medicine journals are not covered in heavily used databases such as PubMed. Librarians may want to do their own research into other resources that index this kind of information and as popular databases, such as PubMed, begin to include more and more CAM and integrative medicine, develop ways to alert integrative medicine professionals about these additions. One respondent mentioned her library at one time provided an updated list of journals dealing with CAM and notification of the latest arrival.

Providing these sorts of lists and notification systems is a good way for librarians to develop relationships with integrative medicine professionals. This study found that the majority of this population conducts their own information searches rather than consult with librarians. However, respondents did note library services that would be valuable to their information searches, such as having electronic access to CAM and integrative medicine journals. One respondent would like the library to offer learning

strategies to make searches more focused and efficient. Therefore, librarians should concentrate on electronic resources, specialized notification systems, and instruction of learning techniques for this population.

Weinberg, Ullian, Richards, and Cooper (1981) have noted the importance of physicians seeking advice from colleagues and this behavior also seems important in integrative medicine. One respondent described getting weekly e-mails from a colleague listing integrative medicine publications. This may be related to the difficulty in finding CAM and integrative medicine information resources, or their unfamiliarity with CAM and integrative medicine resources.

One limitation of this survey is that it did not ask about integrative medicine professionals' familiarity with CAM and integrative medicine resources such as the Allied and Alternative Medicine database (AMED) and the National Center for Complementary and Alternative Medicine's (NCCAM) CAM Citation Index. Similar studies in the future should perhaps list these databases as choices in a close-ended question to gauge integrative medicine professionals' awareness of these types of resources. Surprisingly, only one respondent mentioned using AMED and NCCAM to search for information. Most respondents relied on the Google search engine or PubMed to find information. The Internet was turned to more often than databases to find information, which is of concern given the wide variation in the quality of information found on many health-related web sites. (Risk and Peterson, 2002) This may indicate the opportunities for librarians to educate this population in selecting and evaluating Internet-based CAM and integrative medicine information as well as familiarize them with databases other than PubMed that may be useful.



In a study of information-seeking behavior in CAM, Owen and Fang (2003) found that respondents did not find textbooks or journal literature as useful as their traditional medicine counterparts, owing that to the paucity of texts generally held to be authoritative sources of CAM information. While this study did not ask the respondents to rate the usefulness of these types of print resources, numerous CAM and integrative medicine specific resources were mentioned as being print resources turned to for information. Perhaps integrative medicine professionals have become more familiar with print resources or these resources have become more accessible in the years since Owen and Fang's study.

This study only investigated North Carolina integrative medicine professionals and due to the small sample size and low response rate, one cannot assume that the results of this study could be generalized to integrative medicine professionals across the country. Future studies may want to expand the study population to academic programs and centers for integrative medicine in other states. Additionally, this study only investigated professionals affiliated with academic programs and established centers and therefore, the resources they have available to them due to their affiliation. There are many individual and small group practices of integrative medicine professionals and future studies may want to look at this population and see how their information-seeking behaviors and information needs differ from those that have access to university library systems.

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## **APPENDIX A. SURVEY INSTRUMENT**

Question 1: What is the title of your position?

Question 2: What is your role in this position? Or what are your major responsibilities?

Question 3: For what reasons do you search for information? Please check all that apply.

1. Professional research
2. Patient care
3. Questions from patients
4. Other (please specify)
5. Not Applicable

Question 4: Do you conduct your own information searches or do you consult with a librarian? Please check all that apply.

1. I usually conduct my own searches.
2. I usually consult with a librarian.
3. I conduct my own searches and consult with librarians.
4. Other (please specify)
5. Not Applicable

Question 5: What specific types of information are you looking for when searching for information? Please check all that apply.

1. General research studies
2. Evidence-based studies
3. Case reports
4. Current research

5. News
6. Education materials written for patients
7. Other (please specify)
8. None of the above
9. Not applicable

Question 6: For each category of electronic resources listed below, please indicate specific resources within these categories that you use to search for information.

1. Internet (e.g. Google)
2. Databases (e.g. PubMed)
3. Other
4. Not Applicable

Question 7: Please list any journals or books you routinely browse or search for information.

Question 8: If you use a librarian or library for conducting searches, what library services do you use? Please check all that apply.

1. Personal consultation (via in-person, telephone, email, or chat)
2. Interlibrary loan
3. Library courses (e.g. How to Search PubMed)
4. Electronic resources (e.g. electronic journals, online guides and tutorials)
5. Print resources (e.g. print journals)
6. Other (please specify)
7. Not applicable

Question 9: Whether or not you use a library to conduct searches, what kinds of library services would be valuable to your information searches or needs?

Question 10: How do your information needs differ, if at all, from conventional medical practitioners?

## APPENDIX B. LETTER OF IMPLIED CONSENT

### Letter of Implied Consent

A Study of the Information-Seeking Behavior of Integrative Medicine Professionals

March 23, 2007

Dear Colleague:

As the practice of integrative medicine becomes more common, it is important for library science professionals to understand the research needs of integrative medicine professionals in order to best provide resources and services to this population. Due to your affiliation with an integrative medicine program, you were selected as a possible participant in this study. Your participation in this study is completely voluntary. Approximately fifty integrative medicine professionals similar to yourself have been invited to participate in this study.

To participate in the study you will complete the online questionnaire found here: <http://www.surveymonkey.com/s.asp?u=667653544100>. Your completed questionnaire connotes your consent to be a participant in this study. This questionnaire is composed of eight questions addressing the reasons you search for integrative medicine information and the resources you use in these searches. Completion of the questionnaire should take no longer than 30 minutes. You are free to answer or not answer any particular question and have no obligation to complete answering the questions once you begin.

Your participation is anonymous. All data obtained in this study will be reported as group data. No individual can be or will be identified. The only people who will have access to these data are the investigators named on this letter.

There are neither risks anticipated should you participate in this study nor any anticipated benefits from being involved with it. However, there will be professional benefit from this study, as the information we obtain may be communicated to the profession through publication in the literature or presentation at professional meetings. There is no cost to you or financial benefit for your participation.

You may contact the investigators with any questions at (919) 918-7582 or by email ([aburns1@email.unc.edu](mailto:aburns1@email.unc.edu), [gollop@ils.unc.edu](mailto:gollop@ils.unc.edu)). Additionally, if you would like a copy of this study's resulting paper, please email Allison Burns.

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email to [IRB\\_subjects@unc.edu](mailto:IRB_subjects@unc.edu). If you contact the IRB, please refer to study number 07-0423.

Thank you for considering participation in this study. We hope that we can share your experiences with the greater professional community and use your response to help librarians better understand the research you conduct.

Sincerely,

Allison Burns  
Master's Degree Candidate  
School of Information and Library Science  
Science  
UNC Chapel Hill  
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Email: [aburns1@email.unc.edu](mailto:aburns1@email.unc.edu)

Dr. Claudia Gollop  
Associate Professor, Associate Dean  
School of Information and Library  
UNC Chapel Hill  
Telephone: (919) 962-8362  
Email: [gollop@ils.unc.edu](mailto:gollop@ils.unc.edu)



## APPENDIX C. REMINDER EMAIL

Dear Colleague:

Last week, you received an invitation to participate in a study of the research needs of integrative medicine professionals. If you have already completed the survey, thank you. If you have not already done so, please go to the following link to complete a short survey - it should only take 5 to 10 minutes.

<http://www.surveymonkey.com/s.asp?u=667653544100>

As a reminder, your participation in this study is voluntary and anonymous. You may contact the investigators with any questions at (919) 918-7582 or by email (aburns1@email.unc.edu, gollop@ils.unc.edu).

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email to IRB\_subjects@unc.edu. If you contact the IRB, please refer to study number 07-0423.

Thank you in advance for your participation.

Sincerely,

Allison Burns  
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UNC Chapel Hill  
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## **APPENDIX D. TELEPHONE SCRIPT**

Hello, my name is Allison Burns and I am conducting a study on the research habits of integrative medicine professionals for my master's paper for the School of Information and Library Science at UNC Chapel Hill. You are listed as a contact for information for the [university] program in integrative medicine. Would you be willing to provide a list of names and email addresses of health care professionals affiliated with your program? These potential subjects will be sent a link to an optional online survey. The survey is anonymous and should take 20 to 30 minutes to complete. Thank you for your help.